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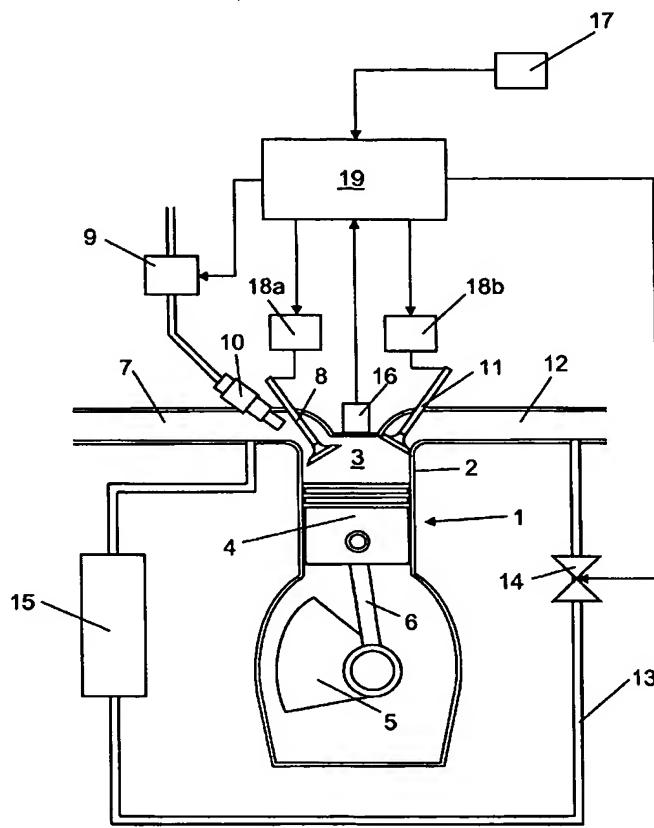
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(54) Title: ARRANGEMENT AND METHOD FOR CONTROLLING A COMBUSTION ENGINE



(57) Abstract: The present invention relates to an arrangement and a method for controlling a combustion engine (1), e.g. of the type called HCCI engine. The arrangement comprises a control unit (19) adapted to controlling the self-ignition of the fuel mixture towards an optimum crankshaft angle ( $\text{cad}_{\text{opt}}$ ) within a load range ( $L_{\text{tot}}$ ). Said load range ( $L_{\text{tot}}$ ) can be divided into at least two subranges ( $L_1$ ,  $L_2$ ) and the control unit (19) is adapted to controlling the self-ignition of the fuel mixture towards an optimum crankshaft angle ( $\text{cad}_{\text{opt}}$ ) within a first subrange ( $L_1$ ) by means of a strategy (I) which entails a variable amount of hot exhaust gases being supplied to or retained in the combustion chamber (3), and within a second subrange ( $L_2$ ) by means of another strategy (II) which entails the effective compression ratio ( $c$ ) in the cylinder (2) being varied.

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